Name________________________________

UMID________________________________

Final Exam
December 19, 2019
Answers

Answer on these sheets. Note that the last page of the exam (page 10) is intentionally left blank for you to use if you run out of space to answer any of the questions, although I do not intend that you should need it, especially for the types of questions asked on most of this exam.

The exam has a total of 85 points.

1. (12 points) The WTO includes many rules. Some rules say what member countries ***must*** do, some what they ***must not*** do, and some rules say things that they ***may*** (but need not) do, so long as they do them in specified ways. For each of the rules listed below, indicate by circling the correct response which category each belongs to.

Rule					
Reduce tariffs on imports	Must	Must Not	May	Not a WTO rule	*Not a WTO rule*
Raise tariffs on imports	Must	Must Not	May	Not a WTO rule	*May*
Levy anti-dumping duties against dumped imports	Must	Must Not	May	Not a WTO rule	*May*
Subsidize exports	Must	Must Not	May	Not a WTO rule	*Must Not*
Treat imported goods, once inside the country, the same as domestically produced goods	Must	Must Not	May	Not a WTO rule	*Must*
Set tariffs above "bound" levels	Must	Must Not	May	Not a WTO rule	*Must Not*
Abide by decision of Dispute Settlement Mechanism or suffer retaliation	Must	Must Not	May	Not a WTO rule	*Must*
If levying safeguards a tariff, apply it to imports from all countries	Must	Must Not	May	Not a WTO rule	*Must*
If levying countervailing duty, apply it to imports from all countries	Must	Must Not	May	Not a WTO rule	*Must Not*
Enact and enforce intellectual property rights	Must	Must Not	May	Not a WTO rule	*Must*
Enact and enforce adequate labor standards	Must	Must Not	May	Not a WTO rule	*Not a WTO rule*
If levying an anti-dumping duty, set it equal to the minimum of the dumping margin and the injury margin	Must	Must Not	May	Not a WTO rule	*May*

2. (8 points) Which of the following units of the European Union,
   A. the European Commission,
   B. the European Council, and/or
   C. the European Parliament,

   do the following? Answer by inserting one (or more, if two units participate) of the letters "A", "B", and "C" in the blanks to the right of each function:

Function

Set tariffs on imports ___*B & C*___

Authorize negotiation of trade agreements ___*B*___

Negotiate trade agreements ___*A*___

Approve trade agreements ___*B & C*___

3. (9 points) Use the graph below of domestic supply and demand for a good in a small open economy to calculate the following:
   a) If the world price is \$3 and the import tariff is 100%,

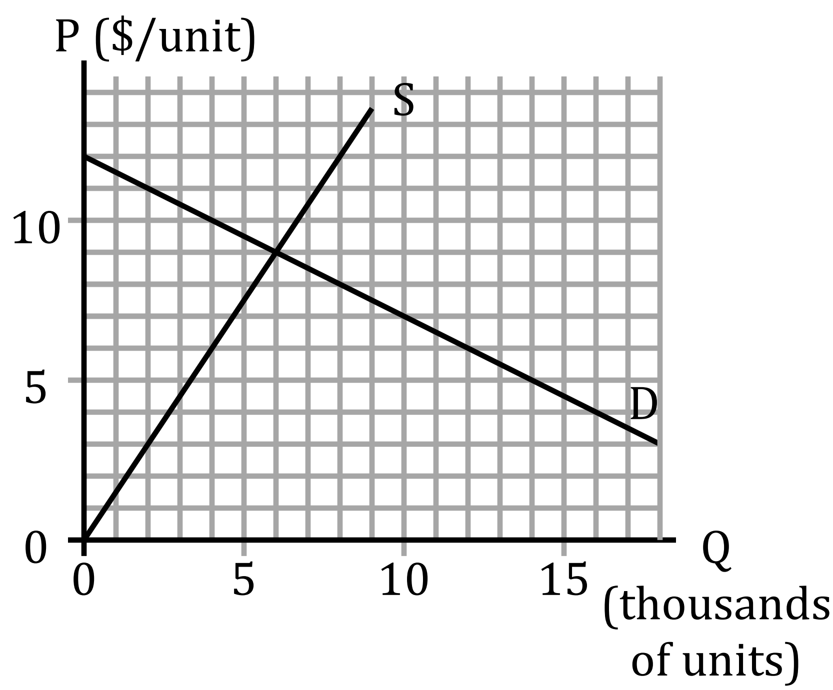
The domestic price	*\$6.00*
The quantity of imports	*8,000*
The tariff revenue	*\$24,000*

   b) If the world price is \$8 and the import tariff is \$4.00 per unit

The domestic price	*\$9.00*
The quantity of the good demanded domestically	*6,000*
The tariff revenue	*\$0*

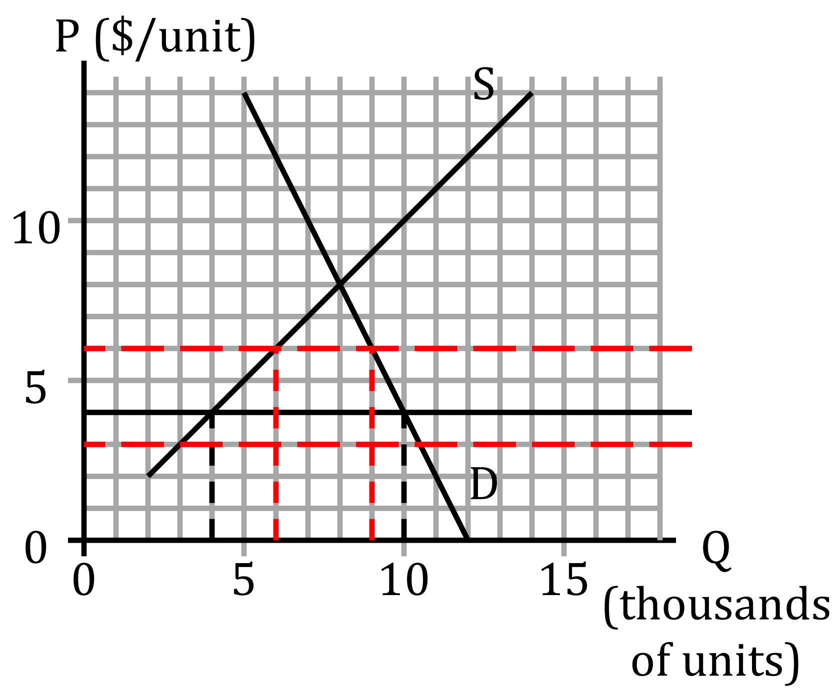
   c) If the world price is \$12 and the import tariff is \$1.00 per unit

The domestic price	*\$12.00*
The quantity of the good supplied domestically	*8,000*
The tariff revenue	*\$0*



4. (11 points) The graph below shows domestic supply and demand for a good in a large country. Initially it has free trade and faces a world price of $4/unit. It then places a 100% tariff on imports of the good, and as a result the world price falls to $3/unit. Draw into the graph the two equilibria: first with free trade and then with the tariff. Then use the labeled amounts in the graph to calculate the following:

The free trade quantity of imports	*6,000*
The quantity of imports with the tariff	*3,000*
The tariff revenue	*$9,000*
The gain (+) or loss (–) to demanders due to the tariff	*–$19,000*
The gain (+) or loss (–) to the importing country as a whole due to the tariff	*$0*



5. (10 points) The table below shows a variation of the payoffs (profits) to US-based Boeing and EU-based Airbus when they produce (P) and do not produce (N) in the export-duopoly game between them that we saw in class but with different numbers:

		Airbus	
		P	N
Boeing	P	–20 –10	0 110
	N	80 0	0 0

a) If initially Boeing is already producing, will Airbus then choose to produce or to not produce? *Not produce*

b) If the EU now provides Airbus an export subsidy of 15, and if Boeing is still producing, will Airbus then choose to produce or to not produce? *Not produce*

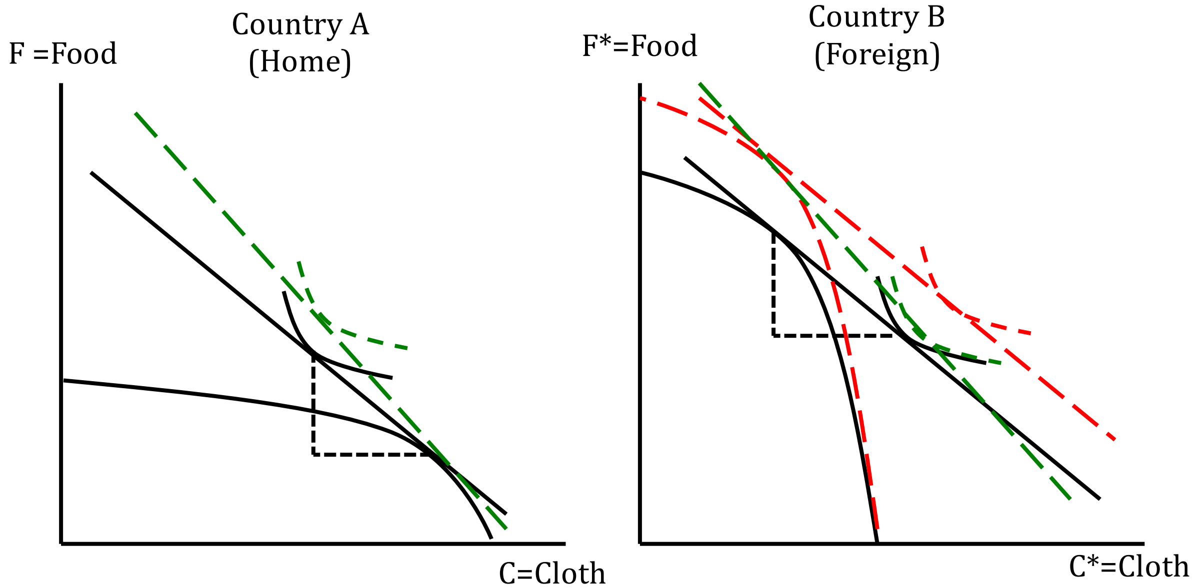
c) If the EU provides Airbus an export subsidy of 25, and a new equilibrium is reached, what will be the profit or loss of Airbus? *105*

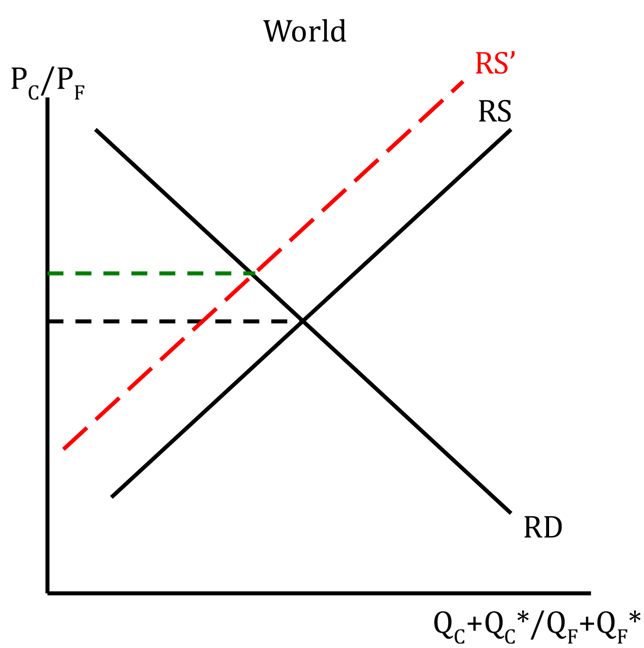
d) If the EU's export subsidy to Airbus of 25 is now increased to 30, what does this do to the welfare of the EU as a whole, compared to the equilibrium in part (c)? *No change*

e) Why?

Because the increased subsidy does not change the profit that Airbus derives from the market (which was given in the table), so the extra subsidy therefore just adds to both the benefit of Airbus and the cost to the EU government. Since both of these are part of the EU, these amounts just cancel out.

6. (9 points) Does a country benefit or lose from growth in the economy of the country with which it trades? To answer this question in the particular case of the Standard Model shown below, draw into the figures what will happen to both countries if the foreign country's ability to produce food becomes larger by some fixed percentage for all possible levels of its output of cloth. Then show what this will do to world relative supply and demand, the equilibrium world relative price, and the welfare of the home country.





In very few words, has the home country been made better or worse off by this change, and why?

Ans: It is better off because its terms of trade has improved. (In more detail than needed: the increased supply of food abroad has lowered food's price on the world market, increasing the relative price of the home country's export, cloth, and thus improving its terms of trade.)

7. (9 points) A few years ago, Canada concluded a free trade agreement with the European Union. Assume that this FTA has gone fully into effect; that there is no trade agreement between the EU and the US; and that the only relevant current FTA is NAFTA, which was in existence for many years before the Canada-EU FTA.

   Consider the following changes in trade that may have occurred due to the Canada-EU FTA. Each is an example of a phenomenon that we studied. State what that phenomenon is, and say which countries gained and which lost (if any) from them if they occurred? (There's no need to say who gains and loses *within* countries.)

   a) Canada imported from the EU products that it previously produced in Canada

      Trade creation: Canada and the EU both gained.

   b) Canada imported from the EU products that it previously imported from the US

      Trade reversion: Canada and the EU both gained and the US lost. (Trade reversion, since imports had previously been diverted from the EU by NAFTA.)

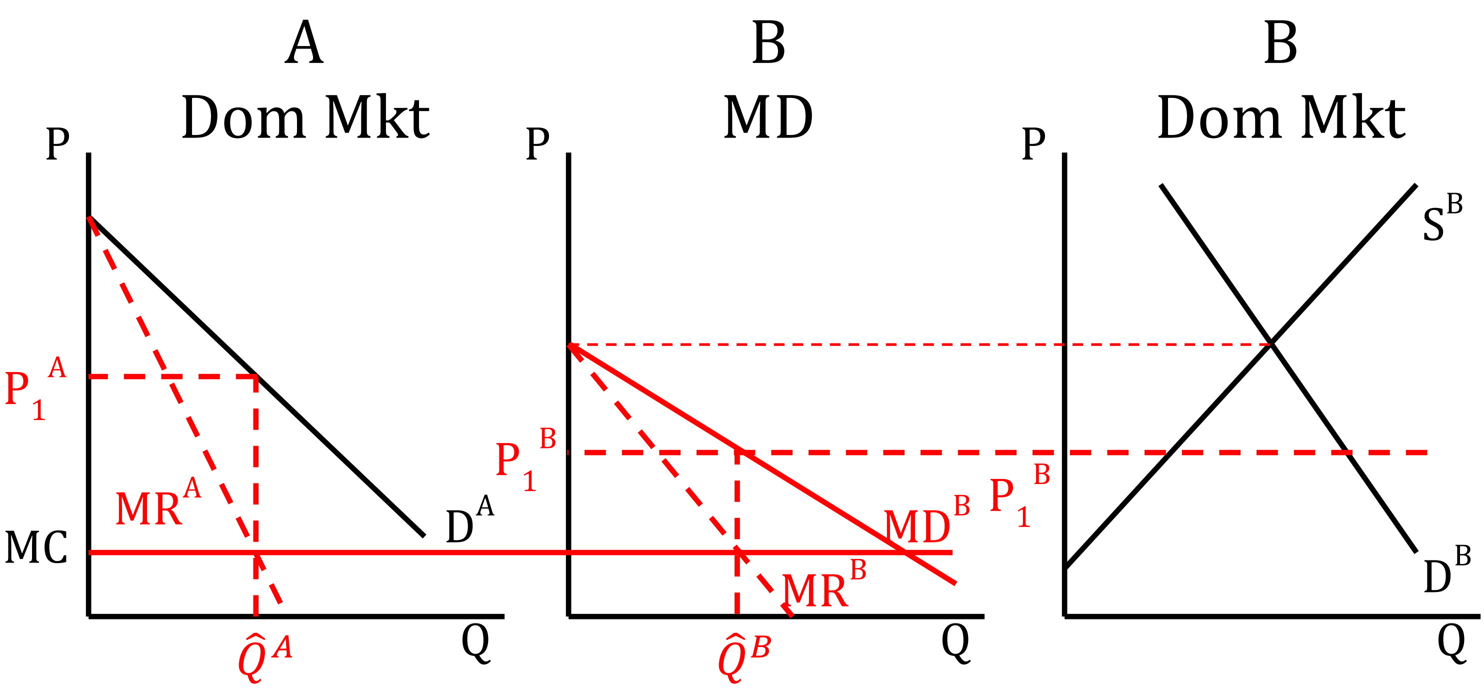
   c) Canada imports from the EU products that it currently imports from Japan

      Trade diversion: Canada and Japan both lost and the EU gained.

8. (8 points) The left panel in the diagram below shows domestic demand, D^A, for a good in Country A, where only a single firm produces the good and has the constant marginal cost shown as MC. The only other country in the world is Country B, which has competitive suppliers of the good with supply curve S^B and demand curve D^B. Assume that Country A has a prohibitive tariff on imports of this good, so that its firm can, if it chooses, charge a higher price in Country A than it charges for exports to Country B.
   a) Construct, in the center panel below, Country B's demand curve for imports from Country A, and label it MD^B.
   b) Derive in the figures and label as $\hat{Q}^A$ and $\hat{Q}^B$ the profit maximizing quantities for Country A's firm to sell in Country A (in the left panel) and to export to Country B (in the center panel).
   c) In your answer to part (b), is Country A's firm engaged in dumping? Why or why not?

   d) Without putting anything further into the figures, indicate by circling the correct answer, using what you learned in class about this model, what will happen to the following if, in response to fear of an anti-dumping duty by Country B, the firm in Country A now changes its behavior so as not to dump.

i) Price in Country A	Rise	Fall	Unchanged	Unsure	*Fall*
ii) Price in Country B	Rise	Fall	Unchanged	Unsure	*Rise*
iii) Country A firm profit	Rise	Fall	Unchanged	Unsure	*Fall*
iv) Country B imports	Rise	Fall	Unchanged	Unsure	*Fall*



9. (9 Points) Using what you know about the trade policy actions of the United States and other countries over the last two years, together with your understanding from this course of the economics of trade policies, write a short essay on who you think have been the winners and losers, in the US and elsewhere, from these trade policies.

Ans: The following could all be mentioned in answer to this question (I'm hoping that you will mention at least three of them with some detail on each):

- *Trump's tariffs on steel and aluminum have benefited US producers of those metals, but have hurt other US industries that use them as inputs. They have also likely hurt foreign producers of those metals in countries that were subject to the tariffs. US consumers of the many products that use these metals have been hurt by higher prices.*
- *Trump's tariffs on China hit such a wide variety of products that it is hard to say which particular industries were affected, though some surely were, both positively and negatively. The broader harm seems likely to have been to US consumers of products that cost more from China, and some harm to Chinese firms.*
- *China's retaliatory tariffs have hit US agriculture particularly hard, especially farmers of soybeans. China's consumers are undoubtedly paying more for these products, but they are also buying more from places like Brazil, whose farmers are benefiting from them.*
- *The US has restricted trade with the Chinese company Huawei, which has surely hurt that company as well as the many US firms and consumers that would otherwise benefit from Huawei's products. The benefit, if these actions are justified as the US claims, is that we avoid Chinese government spying on the US through Huawei's products.*
- *France imposed a tax on the revenues of technology firms, a market that is dominated by US firms such as Google, Facebook, and Amazon. This hurts them, of course, but by prompting retaliatory tariffs by Trump on French wines and cheeses, it now hurts both their producers and our consumers.*
- *The renegotiation of the NAFTA has not yet actually changed any trade policies, but it likely will if the USMCA is ratified, as now seems likely. The main effect that we studied of the USMCA is its more stringent rules of origin, especially on cars, which will raise the costs of car companies and therefore their prices, while perhaps increasing their employment of labor. So labor may gain while the car companies lose in competition with foreign companies, and US car buyers will pay more for cars. (Other effects of USMCA could be mentioned, such as the benefits to US dairy farmers.)*
- *A much more general effect of all of these policy changes, as well as others that have been threatened, is that they have increased uncertainty in the market. This matters most for firms that may be postponing investments that they would undertake, awaiting clarity about the trade-policy environment. This hurts them, but also the economies of the US and the world more generally.*

[This page intentionally left blank for your use if needed.]